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Changes in cell size and morphology influenced by bacterial RNAse

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Abstract

It has been found that a single interperitoneal injection of mice with NKLy ascite lympholeucosis cells and Bacillus intermedius RNAse or its derivative, obtained in result of activation of the active centre, on histidine induces an increase in size of cells cultured in vivo, the number of morphological changes in the cell cytoplasm, cell nucleus and, to a large extend, in the cell surface. A share of 2-3 nucleated cells increases as a result of both an incomplete mitosis and cell fusion. These changes do not depend on catalytic activity of RNAse. 24 hours following RNAse injection, both dimensions and morphology of the majority of cells returned to the norm. The trigger mechanism resulting in all the above mentioned changes is thought to be RNAse bringing about nonspecific irritation (reversible damage) of cells.